

REMARKS

Applicants have carefully considered the October 23, 2007 Office Action, and the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-24 are pending in this application. Claims 5-20 were withdrawn from consideration pursuant to the previous restriction requirement. Applicants submit that the present response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

The Examiner is requested to expressly consider the Information Disclosure Statement submitted on July 25, 2006 and make of record the references cited on the PTO-1449. In particular, the Examiner is requested to forward a properly initialed copy of the PTO-1449 with the next Office action. Applicants acknowledge the Examiner's statement at the bottom of the PTO-1449 form stating that all the references have been considered except where lined through. However, Applicants respectfully submit that the Examiner's statement appears to contradict previous PTO procedure requiring an Examiner to initial next to each reference. As such, the Examiner is requested to forward Applicants a copy of the PTO-1449 with the Examiner's initials next to each reference considered to ensure that the references appear among the "References Cited" on any patent to issue therefrom.

Claims 1-4 and 21-24 were rejected under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over WO 2004/108322 ("Okuda"). The Examiner relied on Okuda et al. (U.S. Pat. App. Pub. No. 2006/0141159, App. No. 10/559,580) as an English equivalent to the WIPO publication. Applicants traverse.

Okuda at numbered paragraphs [0081]-[0082] describes the following:

The expanded PTFE sheet used in the present invention can be produced in accordance with, for example, the process described in Japanese Patent Publication No 42-13560. A liquid lubricant is first mixed with unsintered powder of PTFE, and the resultant mixture

is extruded into a tube or plate by ram extrusion. When a sheet having a small thickness is desired, the plate-like extruded product is rolled by pressure rolls. After the extrusion and rolling, the liquid lubricant is removed from the extruded product or rolled product as needed. When the thus obtained plate-like extruded product or rolled product is uniaxially or biaxially expanded, an unsintered porous PTFE sheet is obtained. When the unsintered porous PTFE sheet is heated to a temperature of at least 327°C that is a melting point of PTFE while fixing it so as not to cause shrinkage, thereby fixing the expanded structure by sintering, an expanded PTFE having high strength is obtained. When a tube-like extruded product is uniaxially expanded and sintered, an expanded PTFE tube is obtained.

The expanded PTFE tube can be formed into a sheet by cutting it in a longitudinal direction thereof.

In view of the foregoing, the Examiner's assertion (page 3 of the office action) that Okuda "uses the same material and the same processing steps such as extruding, rolling, stretching, sintering and compressing as Applicants for forming the expanded porous PTFE of the present invention[.]" is not factually viable and Okuda's disclosure undermines the Examiner's apparent reliance on the doctrine of inherency.

In particular, the "compressing" that is a step subsequent to "sintering" is not disclosed in Okuda. Even the process disclosed in Japanese Patent Publication No S42-13560B cited in Okuda only discloses "A process for producing a porous structure, comprising forming an unsintered tetrafluoroethylene resin mixture containing a liquid lubricant as described in detail in the specification by extrusion or rolling or a process including both and then heating the formed product to at least about 327°C in a state stretched in at least one direction in an unsintered state." See Claim 1. Thus, "compressing" that is a step subsequent to "sintering" is not disclosed in Okuda.

Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient to establish inherency. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578, 212 USPQ 323, (CCPA 1981). To establish inherency, the extrinsic evidence must make clear that

the missing element must necessarily be present in the reference. In view of the foregoing differences noted above, it is respectfully submitted that Okuda fails to disclose or remotely suggest the residual strain and modulus of longitudinal elasticity, as recited in independent claim 1. It should be readily apparent that the products are different from each other when a comparison of the production processes reveals the distinctions. The Examiner's attention is directed to the non-elected claims 5 and 13 and supporting disclosure regarding the processing specifics. In particular, it is apparent that since the expanded porous PTFE film of the present application is subjected to compressing, the compression greatly affects the properties of the film. Accordingly, the statement that "[i]t is not seen that the residual strain and elastic modulus could have been outside the claimed ranges as like material has like property." as indicated by the Examiner is not sustainable. Reconsideration and withdrawal of the rejection are solicited.

Claims 1-4 and 21-24 were rejected under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over JP 2004/265844 ("Masuda"). The Examiner relied on Masuda et al. (U.S. Pat. App. Pub. No. 2006/0251871, App. No. 10/551,459) as an English equivalent to the JPO publication. Applicants traverse.

Masuda, at numbered paragraphs [0051] and [0064] describes:

[t]he porous PTFE film used in the present invention can be manufactured by the method described in Japanese Patent Application Publication No S42-13560B, for example. First, liquid lubricant is mixed with unsintered PTFE powder and the resulting mixture is pressed into a tubular or planar shape by ram extruding. If a sheet having a thin thickness is to be obtained, the rolling of a planar body is performed by a reduction roll. After the extruding or rolling process, the liquid lubricant is removed from the extruded or rolled product if necessary. The extruded or rolled product thus obtained is expanded at least in one axial direction, so that an unsintered porous polytetrafluoroethylene film can be obtained. If the unsintered porous PTFE film is heated to a temperature equal to or more than 327°C, which is the melting point of polytetrafluoroethylene, and is sintered and solidified in such expanded state while it is fixed so as to prevent the contraction thereof, an extremely high-strength porous PTFE film is obtained. When the porous PTFE film is tubular, the tubular film can be made a flat film by cutting it open.

An example in which a porous PTFE film (A) obtained by the expansion method is used as a base film and polytetrafluoroethylene films of the same material, preferably porous PTFE films (B) and (C), are used as mask layers will be described in reference to FIG. 4. A three layer laminated body is formed by fusion-bonding porous PTFE films (B) 44 and (C) 45 as the mask layer to both faces of the base film consisting of a porous PTFE film (A) 43 as shown in FIG. 4. More concretely, these porous PTFE films are stacked in three layers as shown in FIG. 4, and both faces of the stacked layers are sandwiched between two sheets of stainless boards 41 and 42. Each stainless board has parallel surfaces. By heating each stainless board for 30 minutes or more at a temperature of 320-380°C, three layers of porous PTFE films are melt and bonded with one another. Preferably, quenching is performed using cooling, water or the like to enhance the mechanical strength of the porous PTFE films after the heat treatment. Thus, a three layer laminated body is formed.

The Examiner asserted that “[i]t appears that Masuda uses the same material and the same processing steps such as extruding, rolling, stretching, sintering and compressing as Applicants for forming the expanded porous PTFE of the present invention”, however as with the Okuda reference above, these sections of Masuda fail to disclose or suggest “compressing” as a step subsequent to “sintering”. Even the process disclosed in Japanese Patent Publication No S42-13560B cited in Masuda only discloses “A process for producing a porous structure, comprising forming an unsintered tetrafluoroethylene resin mixture containing a liquid lubricant as described in detail in the specification by extrusion or rolling or a process including both and then heating the formed product to at least about 327°C in a state stretched in at least one direction in an unsintered state.” See Claim 1. Thus, “compressing” that is a step subsequent to “sintering” is not disclosed in Masuda.

In view of the foregoing differences noted above, it is respectfully submitted that Masuda fails to disclose or remotely suggest the residual strain and modulus of longitudinal elasticity, as recited in independent claim 1. It should be readily apparent that the products are different from each other when a comparison of the production processes reveals the distinctions. The Examiner’s attention is directed to the non-elected claims 5 and 13 and supporting disclosure

regarding the processing specifics. In particular, it should be apparent that since the expanded porous PTFE film is subjected to the compressing after the sintering step in the present application, the compressing step greatly affects the properties of the film. Accordingly, the statement that “[i]t is not seen that the residual strain and elastic modulus could have been outside the claimed ranges as like material has like property” as indicated by the Examiner is not sustainable. Reconsideration and withdrawal of the rejection are solicited.

Claims 1-4 and 21-24 were rejected under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over WO 2005/003866 (“Hayashi”). The Examiner relied on Hayashi et al. (U.S. Pat. App. Pub. No. 2007/0160810, App. No. 10/586,341) as an English equivalent to the WIPO publication. Applicants traverse.

The international publication date of WO 2005068134 is July 28, 2005. However, since the international application date of the present application is April 7, 2005, WO 2005068134 is not a prior against the present application. The Examiner’s attention is directed to the Notice of Acceptance of Application under 35 U.S.C. § 371 and 37 C.F.R. § 1.495, mailed by the PTO on March 29, 2007. Reconsideration and withdrawal of the rejection are solicited for at least this reason.

Moreover, Hayashi describes at numbered paragraph [0043] that:

[t]he porous drawn PTFE film or sheet for use in the invention can be manufactured by, for example, the method described in JP-B-42-13560. First, to an unsintered powder of PTFE, a liquid lubricant is mixed, and the mixture is extruded into a tube form or a plate form by ram extrusion. When a film or sheet with a small thickness is desired, rolling to a plate-like body is carried out by a reduction roll. After the extrusion and rolling step, if required, the liquid lubricant is removed from the extrusion molded product or rolling molded product. The extrusion molded product or rolling molded product thus obtained is at least uniaxially drawn, so that an unsintered porous PTFE can be obtained in the form of a film. The unsintered porous PTFE film is heated to a temperature of not less than 327°C, which is the melting point of PTFE, while being fixed so as not to undergo shrinkage, so that the drawn structure is sintered, and fixed. This results in a porous drawn PTFE film or sheet with high strength. The porous drawn PTFE tube can be changed to a flat film or sheet by being cut along the direction of the length.

The Examiner asserted that “[i]t appears that Hayashi uses the same material and the same processing steps such as extruding, rolling, stretching, sintering and compressing as Applicants for forming the expanded porous PTFE of the present invention”, however as with the Okuda and Masuda references above, this section of Hayashi fails to disclose or suggest “compressing” as a step subsequent to “sintering”. Even the process disclosed in Japanese Patent Publication No S42-13560B cited in Hayashi only discloses “A process for producing a porous structure, comprising forming an unsintered tetrafluoroethylene resin mixture containing a liquid lubricant as described in detail in the specification by extrusion or rolling or a process including both and then heating the formed product to at least about 327°C in a state stretched in at least one direction in an unsintered state.” See Claim 1. Thus, “compressing” that is a step subsequent to “sintering” is not disclosed in Hayashi.

In view of the foregoing differences noted above, it is respectfully submitted that Hayashi fails to disclose or remotely suggest the residual strain and modulus of longitudinal elasticity, as recited in independent claim 1. It should be readily apparent that the products are different from each other when a comparison of the production processes reveals the distinctions. The Examiner’s attention is directed to the non-elected claims 5 and 13 and supporting disclosure regarding the processing specifics. In particular, it should be apparent that since the expanded porous PTFE film is subjected to the compressing after the sintering step in the present application, the compressing step greatly affects the properties of the film. Accordingly, the statement that “[i]t is not seen that the residual strain and elastic modulus could have been outside the claimed ranges as like material has like property.” as indicated by the Examiner is not sustainable. Reconsideration and withdrawal of the rejection are solicited.

Claims 1-4 and 21-24 were provisionally rejected on the ground of nonstatutory obviousness-double patenting as being unpatentable over claims 1, 5 and 6 of copending application No. 10/551,459 (U.S. Pat. App. Pub. No. 2006/0251871 to Masuda et al.). Applicants traverse.

In response, Applicants note that a double patenting rejection of the obviousness-type is nearly analogous to the nonobviousness requirement of 35 U.S.C. § 103. See *In re Braithwaite*, 379 F.2d 594, 154 U.S.P.Q. 29 (CCPA 1967). Moreover, any analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. § 103 obviousness determination. See *In re Braat*, 937 F.2d 589, 19 U.S.P.Q.2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 U.S.P.Q. 645 (Fed. Cir. 1985). The factual inquiries outlined in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103, should be employed when making an obvious-type double patenting analysis. Therefore, Applicants respectfully traverse the obvious-type double patenting rejection for substantially the same reasons set forth above in response to the 35 U.S.C. § 103(a) rejection predicated upon Masuda. Reconsideration and withdrawal of the rejection are solicited.

Claims 1-4 and 21-24 were provisionally rejected on the ground of nonstatutory obviousness-double patenting as being unpatentable over claims 1, 5 and 6 of copending application No. 10/562,447 (U.S. Pat. App. Pub. No. 2006/015410 to Oyama et al.). Applicants traverse.

Oyama, at numbered paragraphs [0062], [0057] and [0081], describes the following:

[i]n addition, when the fluorine resin thin film used in the fluorine resin tubular article of the present invention is manufactured by such the procedure, a few pores may remain, as far as the pores do not become problematic in properties in the fluorine resin tubular article which is a final product. Specifically, as described above, it is not a problem that 5% or less, preferably 1 % or less of pores remain. A fluorine resin thin film having a porosity of 0% is most preferable.

The present specification describes that “After the compression, an expanded porous PTFE film (B) having good elastic recovery property in the thickness-wise direction of the film is provided. The porosity of the expanded porous PTFE film (B) is generally 40 to 75%, preferably 45 to 70%. If the porosity of the expanded porous PTFE film (B) is too low, such a film shows a tendency to lower the elastic recovery property in the thickness-wise direction of the film. The upper limit of the porosity in the expanded porous PTFE film (B) is limited to about 75% or lower by compression.

After the compression, an expanded porous PTFE film (B1) having good elastic recovery property in the thickness-wise direction of the film is provided. The porosity of the expanded porous PTFE film (B1) is generally 40 to 75%, preferably 45 to 70%.

Since Oyama and the present invention are different from each other in porosity as described above, the properties of the stretched porous PTFE films of both application are naturally different. The test for double patenting of the obviousness type is whether the claims encompassed by the present application constitutes a mere obvious variation of the claims of the Oyama. In view of the foregoing distinction, no such conclusion can be drawn. Applicants, therefore, respectfully submits that the imposed rejection is not factually or legally viable and, hence, solicits withdrawal thereof.

Claims 1-4 and 21-24 were provisionally rejected on the ground of nonstatutory obviousness-double patenting as being unpatentable over claims 1, 5 and 6 of copending application No. 10/586,341 (U.S. Pat. App. Pub. No. 2007/0160810 to Hayashi et al.). Applicants traverse.

In response, Applicants note that a double patenting rejection of the obviousness-type is nearly analogous to the nonobviousness requirement of 35 U.S.C. § 103. See *In re Braithwaite*, 379 F.2d 594, 154 U.S.P.Q. 29 (CCPA 1967). Moreover, any analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. § 103 obviousness determination. See *In re Braat*, 937 F.2d 589, 19 U.S.P.Q.2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 U.S.P.Q. 645 (Fed. Cir. 1985). The factual inquiries outlined in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966), that are applied for

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establishing a background for determining obviousness under 35 U.S.C. § 103, should be employed when making an obvious-type double patenting analysis. Therefore, Applicants respectfully traverse the obvious-type double patenting rejection for substantially the same reasons set forth above in response to the 35 U.S.C. § 103(a) rejection predicated upon Hayashi. Reconsideration and withdrawal of the rejection are solicited.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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